

GERIATRIC RESEARCH, EDUCATION AND CLINICAL CENTER

Annual Report: Fiscal Year 2004

Part II: Accomplishments

NOTE: The **GRECC Annual Report** reflects status and accomplishments of **GRECC Core Staff** (as defined below) only. Report year is from October 1 through September 30. This Accomplishments report should be no more than a total of ten pages.

GRECC Core Staff includes **Primary Core**, **Affiliated Core**, and **Research Core**. **Primary Core** = positions authorized by the original GRECC allocation plus any addition in ceiling from VA Central Office specifically designated for GRECC. **Affiliated Core** = Staff who work full- or part-time in direct support of the GRECC's research, education or clinical activity. May be either "contributed" by the VA Medical Center or acquired through centralized enhancements/awards for programs such as Home-Based Primary Care, Geriatric Evaluation and Management Program, etc. To be considered Affiliated Core, staff must be organizationally aligned under the GRECC or specifically identified by the Medical Center as GRECC-affiliated staff. **Research Core** = Full-or part-time staff who devote 51% or more of their total time to GRECC research and whose salaries are supported by research funds (either VA or non-VA). Includes all GRECC staff whose salaries are paid from research funds (e.g., Associate Investigator, Assistant Research Scientist, Senior Research Career Scientist; Research Career Scientist, Advanced Research Career Scientist).

1. GRECC NAME/LOCATION

- a. **GRECC Name:** Sepulveda
- b. **Location:** VA Greater Los Angeles Healthcare System - VISN 22

2. CONTACT PERSON

- a. **Name:** Laurence Z. Rubenstein, M.D., M.P.H.
- b. **Position:** Director, GRECC
- c. **Phone, e-mail:** (818) 895-9311, Laurence.Rubenstein@Med.VA.Gov

3. GRECC FOCUS AREA(S)

NOTE: Each problem area should ideally be approached from the basic biomedical, clinical and health services research perspectives, as well as from the rehabilitation research perspective where that expertise exists. The number of problem areas should be limited to one or two. If the focus of research is different for basic biomedical, clinical, health services and/or rehabilitation research, there should be no more than a total of 4 major areas of investigation. Changes to GRECC focus area(s) must be approved by VACO (114).

- a. **Basic Biomedical:** Endocrinology of aging, Molecular biology of bone and brain, Alzheimer's disease
- b. **Applied Clinical:** Falls and instability, Long-term care, Exercise, Sleep
- c. **Health Services:** Geriatric assessment, Cost-effective health care, Quality of care
- d. **Rehabilitation:**

4. ADMINISTRATION

- a. **GRECC Impact on Host VAMC in Current Year** (*list up to five most important ways in which the GRECC has had specific impact on host VAMC research, staff education, program evaluation, or clinical care improvements for elderly veteran ; up to five lines each*):

- GRECC clinicians support 14 clinical programs and provide attending coverage. The medical center directly benefits from gaining additional physicians from GRECC who increase clinical productivity and by strengthening the programs through the dissemination of the specialized knowledge. The additional GRECC physician FTEE contribute approximately \$842,000 in direct salary support to the station's clinical staff.

- GRECC staff participates on 18 different research, clinical, education committees. Committee meetings are more comprehensive because discussions include specialized knowledge in the areas of geriatrics and gerontology.
- GRECC core staff supervises ≥ 230 trainees ensuring the educational experience is comprehensive, diverse, meaningful and that the interactive dynamic between trainees and staff occurs in a structured environment which optimizes the trainees learning experiences
- GRECC staff provides multiple lectures, including Medical Grand Rounds for GLA staff who benefit from the knowledge and skills of GRECC clinicians.

b. **GRECC Impact on VISN in Current Year** (*list up to five most important ways in which the GRECC has had specific VISN-wide impact on research, education/training, program evaluation, or clinical care improvements for elderly veterans, i.e., how GRECC participation in VISN-wide activities has “made a difference” in these areas within the entire VISN; up to five lines each. NOTE: GRECCs are intended and expected to serve as a regional, and not merely local resource*):

- In FY-04 GRECC researchers brought in an additional \$2.93 million in direct funds from research projects. In addition, the VERA formula contributed approximately \$1.40 million to the VISN research budget, based on these external research funds. These funds provide the VISN greater flexibility in distributing facility budgets especially in times of budgetary shortfalls.
- GRECC staff provides administrative support to VISN initiatives (Telehealth program, Special Fellowship Program in Advanced Geriatrics, State Veterans Homes) that maintains the operations of specialized programs. The support is in addition to other existing responsibilities. The VISN benefits by not having to provide additional support for these programs.
- The GRECC provides three annual CME conferences on subjects relating to geriatrics and extended care, targeted to GLA and VISN GEC. The GRECC writes and edits articles for VISN staff and for patients for VISN 22’s newsletter and Veterans Health Today.
- GRECC senior staff serves on a number of standing and ad hoc VISN committees and provide expertise and ongoing administrative support for a variety of VISN initiatives.

c. **GRECC Trend-Setting Innovations since October 1, 1999** (*list up to five most significant GRECC research, education or clinical innovations in past five years; for each item, provide date, GRECC staff responsible, and up to five line description*):

- Fall prevention in older adults has been a major focused research, clinical and education agenda for the GRECC. Highlights of innovations from the past 5 years include: 1) LZ Rubenstein chaired a bi-national (US-UK) task force resulting in a published and widely disseminated clinical practice guideline for preventing and managing of falls in older adults (*J Am Geriatr Soc* 49:664-72, 2001; *J R Coll Phys Edinb* 33:262-72, 2003). 2) LZ Rubenstein publishing an exhaustive and widely- cited meta-analysis on intervention studies to prevent falls (*Br Med J* 328:680-87, 2004). 3) J. Kramer, PhD, L. Rubenstein, MD, MPH, Steve Castle, MD in partnership with Archstone Foundation, the California Endowment and other community organizations developed a state-wide educational initiative to prevent falls in older adults (A California Blueprint for Fall Prevention, 2003 monograph available at www.archstone.org). 4) LZ Rubenstein and KR Josephson published randomized trial results of an effective exercise-based intervention for preventing falls among fall-prone veterans (*J Gerontol Med Sci* 55A: M317-21, 2000). 5) LZ Rubenstein and D Saliba

published an analysis of how well physicians in two large representative managed care organizations care for older patients with falls and mobility problems, using established quality indicators (*J Am Geriatr Soc* 52: 1527-31, 2004). 6) LZ Rubenstein has provided extensive national and international outreach and consultation to assist in developing and evaluating fall prevention systems (e.g., VA Healthcare System, Medicare, and Centers for Disease Control).

- In 2001, Drs. TJ Hahn, J Kramer, S McDougall and LZ Rubenstein developed the VISN Geriatrics and Extended Care Committee (GECC) with representatives from each of the 5 medical centers, to improve the scope, access, quality and efficiency of GEC care, and to enhance GEC related education and research activities, in the VISN. This Committee, chaired by Dr. Hahn, has been highly successful in all of these areas, bringing VISN VA and community-based GEC care performance to and above VACO standards. Over the past 3 years, GECC efforts have resulted in the opening multiple new clinical GEC programs VISN wide to improve access and quality of care.
- Drs. G. Cole and S. Frautschy developed a positron emission tomography imaging probe that allows researchers to image Alzheimer lesions in living patients. The probe has been used in 90 patients and works in vitro and in vivo in an animal model. Working with imaging specialists at UCLA, the investigators have submitted a program project and have received favorable reviews. (*Neuroscience* 117(35):732-30, 2003)
- Drs. CA Alessi, J Martin, KR Josephson and others have developed a methodology to screen older people for sleep disorders in both nursing home and rehabilitation settings. These methodologies combine wrist actigraphy (to estimate sleep versus wakefulness) behavior observations (performed by trained staff) and questionnaires (in residents with intact cognitive ability). The methodologies used have demonstrated that sleep disturbance is common among older people in institutional settings. (*Sleep* 26 (Suppl), A158, 2003; *Sleep* 27 (Suppl), A353, 2004).
- Drs. LZ Rubenstein, CA Alessi, JR Josephson, D Saliba & others have developed new methodologies to screen older people for common geriatric conditions. This includes an innovative, brief postal survey which can be mailed to older people to identify those at high-risk for common geriatric conditions and future functional decline. This survey, the Geriatric Postal Screening Survey, was extensively validated in a large sample of older veterans (Alessi CA, et al *J Am Geriatr Soc* 51(2):194-202, 2003). This group has also developed and validated 5-item version of the 15-item Geriatric Depression Scale, which is increasingly used by researchers and providers as a method to screen for depression in older people. (*J Am Geriatr Soc* 47:873-878, 1999) as well as a short-form version of the mini-nutritional assessment (MNA-SF) (*J Gerontol Med Sci*, 56A:M366-372, 2001). The Vulnerable Elders Survey (VES-13) is a brief, function-based screener that identifies community-dwelling elders at increased risk for death or decline in 2 years (*J Am Geriatr Soc* 49: 1291-99, 2001). It was one of the 5 most requested manuscripts from JAGS in 2002 and has been applied in clinical practices nationwide.

5. RESEARCH

- a. **Key Findings Published in Current Year – GRECC Core Staff as PI or CO-PI** (list up to five; for each item provide GRECC Core Staff name(s), journal reference, and up to five line description of topic/method/ results/clinical significance; use layperson language):
 - B.J. Kramer, PhD, tested the feasibility of linking and merging VA and Indian Health Services (IHS) administrative databases for health services research. The results indicate that dual use by mutual beneficiaries can be described and gaps in care identified for the first time using this method. This innovation will facilitate closer cooperation between the two federal agencies that share mutual beneficiaries in American Indian and Alaska Native veterans, and this resource will be a crucial

element in operationalizing the VA-IHS Memorandum of Understanding to improve access and sharing of resources (“Assessing Health Care by American Indian Veterans: A pilot study using VA and IHS administration databases.” IHS Technical Monograph, March 2004)

- L.Z. Rubenstein, MD published a comprehensive meta-analysis on intervention studies for preventing falls in older adults, which confirmed that these interventions can be highly effective in reducing falls and injuries. This work has been the basis for ongoing cost-effectiveness studies and plans to include fall prevention activities as a funded Medicare benefit. (*Br Med J* 328:680-87, 2004)
 - M. Rosenthal MD evaluated a new approach to wheelchair seating to improve healing of advanced pressure ulcers by maintaining low interface pressures in two randomized comparison studies. Not only did wounds heal significantly faster in seated wheelchair than on low air loss beds, but function was significantly better for those using the seat (*Arch Phys Med Rehab* 84: 1733-42, 2003).
 - S. Murray, MD identified and synthesized a new bone morphogenic protein (BMP) enhancing peptide that can markedly improve bone healing. This may be clinically useful because of its effects on other bone-inducing substances. (*J Orthopaedic Research* 1-6, 6/2004)
 - D. Saliba, MD and LZ Rubenstein, MD developed a set of specific quality of care process measures to improve outcomes for general medical conditions among institutionalized vulnerable elders. One hundred fourteen quality indicators were identified across 11 medical conditions. These care processes can be measured by medical records or interview. (*JAMDA* 5: 297-319, 2004).
- b. **Key Findings Published in Current Year – GRECC Core Staff as Co-Investigators on Projects with Non-GRECC PI** (list up to five; for each item provide GRECC Core Staff name(s), journal reference, and up to five line description of topic/method/ results/clinical significance; use layperson language):

- Collaborating with the UCLA Alzheimer Center, G. Cole, PhD demonstrated that delays in the progression of Alzheimer’s disease could occur using curcumin, an extract of the curry spice turmeric. (*Current Medicinal, Chemistry – Immun, Endo, Metab Agents*: 2003, 3:15-25)
- G. Cole, PhD demonstrated how Omega-3 protects the body from the harmful effects of oxidation which may be a contributor to Alzheimer’s disease development. Learning and memory depends on an omega-3 polyunsaturated fatty acid (docosahexaenoic acid – DHA). High DHA consumption is associated with reduced Alzheimer's disease (AD) risk. . (*Neuron* 2004, Sep 2;43(5):596-9)
- E. Murray, PhD and S. Murray, MD have isolated, characterized and patented an acidic phosphoprotein that stimulates the bone-forming activity 250% and reduces the time required for bone formation by 25%. This may find wide utility in promoting fracture healing and treating age-related metabolic bone disease. (Murray S, Brochmann E, (Bone Metabolism Research Laboratory)
- In collaboration with the RAND-ACOVE project, LZ Rubenstein, MD and Debra Saliba, MD published a study analyzing quality of care for falls prevention and management activities in two large national managed care organizations. The paper found major gaps in care provided and suggested several ways that care could be improved. (*J Am Geriatr Soc* 52:1527-31, 2004)
- Working with researchers at the Borun-UCLA Research Center, CA Alessi, MD and J Schnelle, PhD evaluated factors which lead to excessive time spent in bed in long-stay nursing homes residents (NHR). Studying approximately 1000 NHR, it was found that resident spent an average of 17-hours/day in bed. Greater in-bed time was strongly related to lower NH staffing levels. (*J Am Geriatr*

Soc 52:931-938, 2004) This collaboration also determined that the Minimum Data Sets (MDS) bedfast quality indicator (QI) on time spent in bed did seem to identify nursing homes where residents spent more time in bed, but these home actually provided more activity and mobility care to residents than homes with lower bedfast QI scores (*Nursing Research* 53(4):260-272, 20004).

6. EDUCATION

NOTE: Do not list trainee and conference data here. Those data are reported in the GRECC Electronic Database.

a. **Innovations in Educational Activities Implemented During Current Year** (*list up to five; for each item, up to three lines on how it is innovative*):

- Geriatric medicine fellows' curriculum was enhanced to help them become future geriatric leaders by co-authoring of at least 1 peer-reviewed article in the *Journal of the American Medical Directors Association*.
- GRECC expanded its educational collaboration partnerships on wellness and aging to include California State University, Fullerton, located within VISN 22. This innovation expands faculty expertise to include community-based settings.

b. **Exportable Educational Products First Available for Distribution in Current Year** (*list up to five most important products; for each item, up to three lines summarizing content, target audience, format, product evaluation results. Include educational products developed in previous years ONLY if this is the first year they have been available for distribution*):

- In 2004, the syllabus on decisional capacity in notebook form was completed. The target audiences included Medicine, Nursing, Social Work, Psychology, Psychiatry, PM&R, and Institutional Review Boards.
- In 2004 a syllabus on geriatric medicine and board review in notebook form was completed. The target audience included Medicine, Nursing, Pharmacy, and Psychiatry.
- In 2004, The Vials of Life program was implemented to assure that vulnerable patients in home-based primary care, adult day health care and geriatric medicine clinics have up-to-date medical information to provide to emergency treatment teams.

7. NEW CLINICAL MODELS

NOTE: These are new models of care for elderly veterans that the GRECC is developing and evaluating, in relation to its area(s) of focus. This is NOT a list of all Geriatrics & Extended Care clinical programs at the host VAMC.

a. **New Clinical Models Implemented in Current Year** (*list all new clinical models or significant modifications of existing models that the GRECC is developing and evaluating. For each item, indicate whether New or Ongoing in current year; provide up to five line description*):

- MDS-III project (New): D. Saliba, MD is taking the lead in revising and validating the third version of the VA Minimum Data Set (MDS-III) for nursing home care performance.
- Psychological education for adult day healthcare (New) – This clinical model utilizes issue-related

health information from geriatric support groups and develops group educational programs to address these issues Sleep disturbances and outcomes of rehabilitation (R): The evaluation has revealed that wrist actigraphy (*a means for clinicians and researchers to measure sleep quality in individuals suffering from sleep disorders*) was compared to direct observations to measure sleep/wake in older patients admitted to post-acute settings for rehabilitation. The results indicate that wrist actigraphy is a valid measure of daytime sleep/wake in older patients admitted to post-acute settings for rehabilitation. (*Sleep* 217 (Suppl A353, 2004))

- Respite evaluation clinic (New) –A new clinic has been developed to evaluate candidates for respite admission to ensure that the veteran will be safe and appropriate. The Respite Evaluation Clinic is run by a physician assistant and GRECC social worker. It also affords an opportunity to educate the veteran’s family about the respite stay.
- Sleep disturbance and outcomes of rehabilitation project (Ongoing) – This project is identifying the prevalence and etiologies of sleep disturbances in older patients admitted to post-acute settings for rehabilitation. Health, behavioral and environmental factors are being evaluated to develop targeted interventions to improve sleep in this population (*J Am Geriatr Soc*, 52 (Suppl 4) S 164, 2004).

b. **Current Year Evaluation Results of New Clinical Models** (*for each clinical model listed in 7-a above, indicate whether evaluated by Research or Quality Improvement project; up to five lines summarizing evaluation outcomes, such as changes in access to care, patient functioning, satisfaction, cost-effectiveness, organizational changes, etc. Note if no evaluation results in current year for a particular model*):

NOTE: Do not list patient service utilization data here. Those data are reported in the GRECC Electronic Database.

- The MDS-III is being actively evaluated in a joint project by D Saliba and VACO.
- Interdisciplinary services for adult day healthcare (Q) was initiated this fiscal year and its evaluation will begin in FY05 when satisfaction with the programs offered will be assessed. Participants in psychoeducational and therapeutic activities will be asked to provide feedback on the value and perceived benefits of services offered by interdisciplinary teams of providers.
- The Respite Clinic has improved patient access to care and increased patient education opportunities. An assessment is currently being conducted to determine caregiver burden and caregiver satisfaction with the program.
- Sleep disturbances and outcomes of rehabilitation (R): The evaluation has revealed that wrist actigraphy (*a means to measure sleep quality in individuals with sleep disorders*) was compared to direct observations to measure sleep/wake in older patients admitted to post-acute settings for rehabilitation. The results indicate that wrist actigraphy is a valid measure of daytime sleep/wake in older patients in post-acute rehabilitation settings (*Sleep* 217 (Suppl A353, 2004)).

c. **New Clinical Models Exported in Current Year** (*list up to five examples, up to two lines each; provide name of new clinical model, name of VA or non-VA facility to which it was exported, and method of export, such as “Falls Clinic protocol sent to X VAMC”*):

- Falls prevention protocols (including clinical guidelines) were provided to over 50 VA Medical Centers via clinical dissemination conferences and workshop.

8. CONSULTATION AND OUTREACH

*NOTE: **Consultation** = GRECC staff going to sites within host VAMC or having those staff come to the GRECC, to assist in development of research, education or clinical programs at those sites. **Outreach** = GRECC staff going to non-host VAMC facilities or having those staff come to the GRECC (in person or by video or other technology) to assist in development of research, education or clinical programs at those sites.*

a. **Current Year Activity Outcomes** (list up to five examples, up to two lines each; summarize specific outcomes realized from current year **consultation**, e.g., “Host VAMC instituted a Falls Clinic after consultation from GRECC staff;” or **outreach**, e.g., X VAMC instituted a Falls Clinic after GRECC outreach via series of videoconferences):

- GRECC staff outreached to VA San Diego Healthcare System and UC San Diego which resulted in a research manuscript on methodologies of studying circadian rhythms.
- GRECC staff outreached to VA Long Beach, San Diego and West Los Angeles resulting in actions plans to improve the interprofessional care plans in clinical practice.
- GRECC staff consulted with VA Miami and VA St Louis on fall prevention (which resulted in improvements to their falls prevention programs) and with VA Dallas, VA Gainville, and VA Chicago assisting them with implementation of the VES-13 survey.
- GRECC staff assisted on the VAHQ Long Term Care Quality of Care Measures Taskforce in developing improved quality assurance measures.
- GRECC staff participates in the VA National Geriatrics Task Force, which significantly revised and updated the VA Geriatric Evaluation and Management (GEM) manual in 2004.

b. **Previous Years’ Activities Outcomes** (list up to five examples, up to two lines each; summarize specific outcomes realized from previous years’ **consultation** to host VAMC or **outreach** to non-host facilities, where results were first realized in the current year.)

- J. Kramer, PhD provided consultation to the California State Veterans Home resulting in the development of the original plans for a new state veterans home, including types of programs and occupancy.